

heat collecting tube plate 1. Then couple the expanding hole of the fin plate to the expanding sleeve of two heat collecting tubes 1. These two heat collecting tubes are "U" shape fluid contained heat transfer tube which is connected at the bottom of the double wall glass vacuum tube. Fin plate 2 is disposed horizontally on the heat collecting tube plate, with the front-back surface are processed by anodize oxidation stain sun selective absorption chemical plating. It adopts double wall transparent glass single-pass vacuum tube. The solar heat collecting unit is installed vertically as stated above.

The working process of the hanging transparent glass vacuum tube solar heat collecting unit application embodiment is as follows: when the sunlight and the reflected light from the reflector plate radiates through the transparent glass tube 3, it is absorbed – reflected – re-absorbed by the faceplate 21 and base plate 22 of fin plate 2 on the front and back working plate of the heat collecting tube plate 1. The radiation is nearly fully absorbed after several times reflection. The energy absorption ratio is approximately 1. The heat energy collected will be transmitted to the joint of base plate 22 and heat collecting tube plate 1. The working media in the heat collecting tube plate transform the solar energy into heat energy by such heat transfer cycle.

What is Claimed is:

1. A hanging transparent glass vacuum tube type solar heat collecting unit, which includes heat collecting tube plate, transparent glass tube and seal cover, characterized in that further comprising fin plates disposed along the axial direction of the glass tube, said fin plate comprises a base plate and a faceplate coupled thereto, which are connected to the heat collecting tube plate plane through the base plate, also, the fin plates are arranged at an angle to the heat collecting tube plate plane.
2. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein the acute angle between the fin faceplate and the heat collecting tube plate plane is within  $10^\circ \sim 90^\circ$ .
3. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein the connection between the fin faceplate and the fin base plate is in the form of one base plate connected to one or more faceplates.

4. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 2, wherein the connection between the fin faceplate and the fin base plate is in the form of one base plate connected to one or more faceplates.
5. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 3, wherein the fin base plate and the fin faceplate may be manufactured either integrally or separately.
6. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein the fin faceplate may be connected from the top/bottom end part of the base plate or other parts of the base plate except the top/bottom end part.
7. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein the distribution density of the fin plates along the heat collecting tube plate in the vertical direction is within 20~2500 per-meter.
8. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 2, wherein the distribution density of the fin plates along the heat collecting tube plate in the vertical direction is within 20~2500 per-meter.
9. The hanging transparent glass vacuum tube type solar collecting unit as claimed in claim 1, wherein the fin base plate and the heat collecting tube plate may be coupled on the single front side or the front-back double sides by welding, bonding or pressurizing.
10. The hanging transparent glass vacuum tube type solar collecting unit as claimed in claim 2, wherein the fin base plate and the heat collecting tube plate may be coupled on the single front side or the front-back double sides by welding, bonding or pressurizing.
11. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein the fin plates are preferably disposed horizontally on the heat collecting tube plate plane.

12. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 2, wherein the fin plates are preferably disposed horizontally on the heat collecting tube plate plane.
13. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein said transparent glass tubes are straight-through or one-end-pass single wall or double wall transparent glass tubes, such as vacuum tubes.
14. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein said transparent glass tubes is vacuumed or infused with inert gas, such as argon gas, krypton.
15. The hanging transparent glass vacuum tube type solar heat collecting unit as claimed in claim 1, wherein said glass tube is equipped with a convection block piece, which is made of transparent or non-transparent sheet.
16. The hanging transparent glass vacuum tube type solar heat collecting as claimed in claim 1, wherein the heat collecting tube plate comprises a heat collecting tube and a heat collecting tube plate, wherein the heat collecting tube may be a mono-tube such as gravity style heat pipe, or multi-tubes such as fluid contained heat transferring tubes; said tube can be communicated between each other.